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ABSTRACT

A study examined the effects of (1) providing students with instruction in a "discourse-structure" reading and writing strategy on college freshmen's recall and comprehension of history textbook passages; and (2) this procedure on the quality of students' expository writing. Subjects, 126 college freshmen, randomly assigned to one of three groups, received instruction and practice in the discourse structure summarization procedure (experimental condition), answered and discussed questions (conventional condition), or neither (control condition) after reading history texts. Analysis of results indicated that the summarization procedure reliably improved the recall of unfamiliar history text for students in the experimental condition when compared to the recall of students in the conventional or control conditions. Results further indicated that the writing of students in the experimental condition received reliably better ratings than did that of control students, though there was no reliable difference between the writing of students in the experimental and conventional conditions. The lack of a reliable difference in the writing of the experimental and conventional groups possibly reflected the overlap of instructional routines used in both groups. (JD)

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Discourse Structure and College Freshmen's Recall and Production of Expository Text

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Abstract

This study examined the effects of providing students with instruction and practice in a discourse structure reading and writing strategy focused on main ideas, supporting ideas, and central ideas (theses), which summarize the thrust of both main ideas and supporting ideas in a passage. Subjects, 126 university freshmen in six intact classes, were assigned to one of three treatment conditions: (a) two experimental groups that received instruction and practice in the discourse structure summarization procedure after reading history texts; (b) two conventional groups that received instruction and practice in answering and discussing questions after reading history texts; or (c) two control groups that received no special instruction. Results indicated that the instruction and practice in the discourse structure summarization procedure reliably ($p<.05$) improved the recall of unfamiliar history text for students in the experimental condition when compared to the recall of students in the conventional and control conditions. Results further indicated that the writing of students in the experimental condition received reliably ($p<.05$) better ratings than that of students in the control condition, but there was no reliable difference between the writing of students in the experimental and conventional conditions.

Discourse Structure and College Freshmen's Recall and Production of Expository Text

Reading researchers (Anderson, Spiro, & Montague, 1977; Otto & White, 1982; Resnick & Weaver, 1979; Spiro, Bruce, & Brewer, 1980), writing researchers (Beach & Bridwell, 1984; Gregg & Steinberg, 1980; Mosenthal, Tamor, & Walmsley, 1983; Nystrand, 1982; Whiteman, 1981), linguists (de Beaugrande, 1980; Dillon, 1981; Grimes, 1975; Halliday & Hasan, 1976), psychologists (Britton & Black, 1985; Cermak & Craik, 1979; Mandl, Stein, & Trabasso, 1984; van Dijk & Kintsch, 1983), and rhetoricians (Burke, 1969; Howes, 1961; Kinneavy, 1971; Knoblauch, 1984; Perelman & Olbrechts-Tyteca, 1969; Rockas, 1964; Steinmann, 1967; White, 1980) have both tacitly and explicitly explored the relationships between reading and writing. Since reading and writing involve the use of language, the relationships between them seem obvious.

However, the precise nature of these relationships has not been delineated. To be sure, a considerable amount of research has been focused on conceptualizing reading comprehension, but little research in reading has investigated the effects of writing or writing instruction on the development of reading comprehension. Similarly, the current thrust in writing research has focused more on conceptualizing the writing process, while a minimal amount

of this research has examined the effects of reading or reading instruction on the development of writing competencies. As a result, no comprehensive theory or well-defined line of inquiry appears to exist which synthesizes and specificies the relationships between reading and writing.

Given the paucity of research which attempts to explain the relationship between reading and writing, the ability to read and to write expository prose remains essential to achievement in schooling at all academic levels. In order to learn subject matter content, students need to read the expository prose in their textbooks and to write well-organized and cogent prose based on the content of those texts. Of the myriad of variables that affect students' ability to read and to write expository prose, discourse structure has assumed a prominent position in preliminary work of both theorists and researchers examining the relationship between reading and writing.

Specifically, Kintsch and van Dijk (1978); Meyer (1975, 1982); Meyer and Rice (1984); and van Dijk and Kintsch (1983) have provided conceptualizations of discourse comprehension and production which focus on readers' and writers' manipulations of macrostructures and microstructures.[1] In general, these theorists believe that readers apply deletion, generalization, and construction rules to the microstructure (supporting ideas) of a text in

order to form a macrostructure (main idea) of the text. In contrast, writers develop a macrostructure of what they wish to communicate and then apply rules of addition, specification, and elaboration to the microstructure to transform their macrostructure into written texts. Thus, proficient readers and writers must be cognizant of the discourse structure (main ideas and supporting ideas) in a particular expository passage in order to comprehend and generate comprehensible text.

In one study which investigated ninth-graders' ability to follow and use expository discourse organization to generate a macrostructure, Meyer, Brandt, and Bluth (1980) found that students who understood the organization of a passage and used that same organization to write their recall protocols remembered more of the information in the passages than those who did not. In a similar study using sixth-graders, Taylor (1980) found that students who used the organization of a passage in their recall protocols retained more information from the passage at delayed recall than those who did not. Results from both studies, however, indicated that students possessed limited knowledge of expository passage organization.

Two studies have investigated the effects of instruction focused on discourse structure and its use in reading expository prose. Taylor (1982) examined the effects of providing fifth-graders with instruction on

summarizing the content of textbook information using headings and subheadings as discourse structure cues. Results indicated that students who learned to summarize text using this procedure recalled content reliably better than students who simply answered questions on the content. In a somewhat similar study, Slater, Graves, and Piché (1985) examined the effects of providing ninth-graders with a structural organizer with outline grid, which consisted of information on the organization of the passage and a skeleton outline depicting the passage organization. The other conditions included a structural organizer without outline grid, a control condition with notetaking, or a control condition without notetaking. Results indicated that the structural organizer and outline grid reliably increased subjects' comprehension and recall, that notetaking alone reliably increased comprehension and recall, and that the structural organizer without the outline grid reliably increased comprehension but not recall. Taken together, these studies indicate that students who may lack knowledge about text structure can be taught to recognize and use it to improve their recall of expository text.

In general, recent research in writing is consistent with the findings of these two studies in that students appear to have problems organizing and developing main ideas and supporting ideas in their expository compositions

(Brown, 1981). From analyzing an extensive corpus of university freshmen writing, Cooper et al. (1984) found that the majority of students demonstrated a lack of organizational ability attributed mainly to a lack of awareness of the distinction between main ideas and supporting information. Specifically, these university freshmen did not subordinate information effectively and consistently failed in making smooth transitions between main ideas and supporting information. Furthermore, they did not support their main ideas with details, facts, or other types of supporting evidence. Cooper et al. concluded that the discourse organization problems found in the population used in the study were probably typical of the entire freshman class. Finally, the results suggested that proficient university freshmen writers view their texts as a whole and organize the logical relationships between main ideas and supporting ideas from that perspective.

Two studies specifically focused on the relationship between reading and writing have investigated students' knowledge and use of text structure. Beach and Taylor (1981) examined the relationship between fifth- through ninth-grade students' written recall protocols and their writing abilities related to discourse organization. Written recalls as well as expository essays were analyzed. The number of propositions recalled increased and the

organization of students' recall protocols and the holistic ratings of students' essays improved between Grades 5 and 6 and Grades 7, 8 and 9. Recall correlated reliably with one writing measure, elaboration-of-reasons with details, at Grades 5 and 6, and correlated reliably with three writing measures at Grades 7, 8, and 9: focus-of-reasons on a key point, elaboration-of-reasons with concrete details, and overall quality. The quality of organization of recalls also correlated reliably with overall writing quality.

In an instructional study, Taylor and Beach (1984) investigated the effects of discourse structure instruction on seventh-graders' comprehension and production of expository text. An experimental group received instruction and practice in a discourse structure summary procedure after reading social studies texts, a conventional group received instruction and practice in answering and discussing questions after reading social studies texts, and a control group received no special instruction. Results indicated that the instruction and practice in the text structure summary procedure improved students' recall for unfamiliar, but not familiar social studies text. Additionally, experimental students' posttest expository writing was rated reliably better than that of students in the control condition, but their writing was not rated reliably better than that of students in the conventional condition.

The purposes of the present study were two-fold: (1) to examine the effects of explicit instruction focused on discourse structure on university freshmen's recall and comprehension of history textbook passages; and (2) to examine the effects of this instruction on the quality of students' expository writing.

Method

Subjects

A total of 126 freshmen (six intact reading comprehension classes) attending a large state university participated in the study. These six classes were randomly assigned to experimental, conventional, and control conditions. Three instructors taught the six classes. Two of the instructors taught one of the experimental and one of the conventional sections, and the third instructor taught the two control sections. The two control sections participated in all pretests and posttests but received no special instruction in reading or writing beyond that indicated in the standard syllabus for the course.

The Scholastic Aptitude Test (1984) had been administered to the students 8 months prior to the beginning of the study. An analysis of students' verbal scores on this test indicated a mean score of 370 with a range of 201 to 560. A 3 (group) by 2 (posttest set) analysis of variance run on students' verbal scores indicated no reliable main effects (both Fs < 1) or

interaction, $F(2, 125) = 2.69$, $p > .05$, indicating that the three groups did not differ reliably.

Design

The study involved 9 weeks of specially designed reading and writing instruction for experimental and conventional treatment groups as well as pretesting and posttesting in reading and writing for experimental, conventional and control subjects. The design for the reading assessment included two between-subject factors, group (experimental, conventional, control) and passage (Packet A, Packet B) and one within-subject factor, test time (pretest, posttest). The two dependent measures included written recall and short answers. The design for the writing assessment included the between-subject factor of group and the within-subject factor of test time. The dependent measure was a holistic assessment of overall writing quality.

Materials

Nine passages from three college-level history textbooks provided the practice reading material in both the experimental and conventional conditions. The four passages selected from the first text were 7 to 12 pages long and contained approximately 3,000 words. Each passage contained three main headings and from 9 to 14 subheadings. The two passages selected from the second text were 4 to 5 pages long and contained approximately 1,800 words. Each

passage contained two main headings and from 4 to 7 subheadings. The three passages selected from the third text were 5 to 9 pages long and contained approximately 2,800 words. Each passage contained two main headings and from 6 to 8 subheadings. For each passage, 20 questions focused on both main ideas and supporting details were developed for use in the conventional instruction condition.

Additionally, blank outlines for student use were prepared for each passage. Slots in the outlines were labelled for main ideas and supporting ideas as suggested by the main headings and subheadings in the passages. Letters were included down the left margins of the outlines for every section in the passage identified by a subheading.

Finally, three additional passages from the first text were used as reading material for the pretest and posttest. Each passage was 4 to 5 pages long and contained two main headings, from 6 to 8 subheadings, and approximately 1,800 words. A set of 20 practice questions on main ideas and supporting details to be answered by students in the conventional group was constructed for the two passages used for the posttest. A set of 20 test questions for the pretest passage and sets of 20 test questions for the posttest passages were also constructed. These questions were again focused on the main ideas and supporting details in the passages. One-half of the test questions focused on

the same content as some of the practice questions.

Procedures

The pretests and posttests were given by the three instructors participating in the study following detailed scripts written by the investigators. Instruction was provided by the two instructors who taught both the experimental and conventional classes during normal class meetings. These two instructors followed detailed lesson plans developed by the investigators. The third instructor teaching the two control classes provided no special instruction beyond that indicated in the standard syllabus for the course.

Pretests. To begin the study, students in all six classes completed pretests in reading and writing. First, students were asked to take the pretest in reading in which they were asked to read an 1,800-word history passage on the colony of Delaware. Then they were asked to review the passage after reading it in order to prepare for written recall and short answer tests. At the next class meeting students were asked to write as much as they could remember about the passage they had read. Then, they completed a 20-item short answer test on the material.

Next, students were asked to take the writing pretest, which consisted of writing a persuasive letter directed to a specific audience. The students received the following

assignment: "You are writing a letter to the director of admissions urging him to improve course registration procedures. Discuss specific problems in the existing system and then suggest possible solutions." On 8 1/2 x 11 paper students listed the major problems with the existing registration procedures and then listed possible solutions. Then they were told to organize their prewriting, and then write their essay.

Experimental condition. During two 50-minute class periods per week for 9 weeks, students in the experimental group received instruction and practice in how to write and study a summary of history material which they had read. First, students were given a brief introduction to the text and read it. Then, they completed the summarization task. The summarization task included the following steps: (a) First, students completed the blank outline with labelled slots for main ideas and supporting ideas by reading each section of the text and generating two or more statements for that section which they wrote adjacent to the correct letter on their outlines; (b) Next, students generated topic headings which synthesized content in two or more supporting ideas and wrote those headings in the left margin of their paper to connect sections of the passage which were on the same topic, and (c) Finally, students generated a central idea (thesis) in their own words for the entire passage which they wrote at the bottom of their

outline. An excerpt of a summary is provided in Table 1.

Insert Table 1 about here

For the first 5 weeks, the instructors helped students generate their summaries. By the beginning of Week 6, students were generating their summaries independently. During each week, the students as a class discussed their completed summaries with the instructors and compared them with a model provided by the researchers. Focusing on the material that was read, the instructors also discussed with the students the following topics: main idea statements, supporting ideas for main ideas, supporting details for both main ideas and supporting ideas, and central idea (thesis) statements, which summarize the thrust of both main ideas and supporting ideas in a passage. Each week after discussing their completed summaries, students reviewed their summaries. After reviewing them for 10 minutes, they told a partner as much as they could remember about what they had read or had written on their summaries. Beginning in Week 8, students began to practice writing recall protocols.

Conventional condition. During two 50-minute class periods per week for 9 weeks, students in the conventional treatment group received instruction in the form of a directed reading lesson over the same history selections being read by the experimental group. First, students were

given a brief introduction to the text and read it. Then, they completed a set of 20 practice questions based on main ideas and details from the text.

For the first 5 weeks, the students completed approximately 50% of their questions as a group with the instructors. By Week 6, students completed all questions on their own. Each week the students as a class discussed answers to all questions with the instructors and compared them with a model provided by the researchers. After discussing their answers, students reviewed their questions and answers. After reviewing them for 10 minutes, they told a partner everything they could remember about what they had read or had written on their papers. Time was controlled to ensure that students in the conventional group spent as much time on the passages as was spent by students in the experimental group. This was accomplished by using detailed lesson plans for the experimental and conventional groups which specified equivalent time allotments for parallel activities. Beginning in Week 8, students began to practice writing recall protocols.

Control condition. During two 50-minute class periods per week for 9 weeks, students in the control treatment group received instruction in reading comprehension, vocabulary development, and study skills. Each week the students as a class completed exercises which focused on comprehension questions, text summaries, vocabulary exercises, and study skills units. Quizzes and tests

consisted of multiple-choice questions, essay questions, and summarization tasks.

Reading posttest. In Week 10, both treatment groups and the control group completed a reading posttest during regular class time. Students were randomly assigned to read a passage either on how early inventions lead to mass production (Posttest Passage A) or on how industry builds cities (Posttest Passage B). Students in the experimental group were told to read their passage, prepare a summary of the passage, and study their summary. Students in the conventional group were instructed to read their passage, answer short answer practice questions about the passage, and study their questions and answers. Students in the control group were instructed to read their passage, reread the passage, and then study the passage. Students then indicated how much they believed they knew about the topic of their passage prior to reading using a rating scale that ranged from 1 (almost nothing) to 5 (great deal). At the next class meeting, students were asked to write as much as they could remember about what they had read the session before and to answer 20 short answer questions on the passage.

Writing posttest. The following week all students completed a writing posttest in which they again wrote a persuasive letter directed to a specific audience. The students received the following assignment: "You are writing a letter to the director of transportation urging

him to increase the number of commuter runs to the two Metro stations. Discuss specific problems in the existing schedule and then suggest possible solutions to the problems in the schedule." Students listed the major problems with the existing schedule and then listed possible solutions. Then, they were told to organize their prewriting, and then write their essay.

Scoring

The written recall protocols from the pretest and posttest were scored against an appropriate text grid to determine the number of propositions recalled. Two raters, neither of them the researchers, scored the randomly assigned protocols independently. In addition, the two raters scored 30 randomly assigned recall protocols in common in order to provide an estimate of interrater reliability. The Pearson product-moment correlation between raters was .94.

The procedures for counting propositions were those described by Meyer (1975, 1985a, 1985b) but modified for the present study (Piché & Slater, 1983; Voss, Tyler, & Bisanz, 1982). Specifically, each of the passages was divided into content propositions. Semantic role relationships, rhetorical relationships, and hierarchical levels were not included.

Each subject received one point for recalling a proposition if the written protocol contained a verbatim or

a recognizable paraphrase of content words in the correct semantic context.

The short answer tests were scored against a scoring key for number of questions answered correctly. Responses which paraphrased the answers on the scoring key were considered acceptable.

Finally, the pretests and posttests in writing were scored using a 4-point holistic rating scale to assess writing quality (Conlon, 1976; Cooper & Odell, 1977; Freedman & Calfee, 1983; White, 1985). A paper received a score ranging from 1 (low) to 4 (high) for overall quality. Three raters, none of them the researchers, scored the papers independently. Cronbach's alpha reliability coefficient for the three raters' scores, averaged across the pretest and posttest, was .85. The three raters' scores for overall quality were combined to provide a summed rater score for overall quality ranging from 3 to 12. The data analysis was performed on the summed rater score.

Data Analysis

The data analysis consisted of separate 3 (group) by 2 (passage) by 2 (test time) ANOVAs with repeated measures on the last factors: (a) students' written recall and (b) short answer scores; and a 3 (group) by 2 (test time) ANOVA with repeated measures on the last factor on students' writing scores. Finally, a 3 (group) by 2 (passage) ANOVA was

used to analyze students' familiarity ratings for the posttest reading passages.

Results

Reading and Writing Tests

The first analysis made it possible to examine the recall scores. The second analysis made it possible to examine the short answer scores, and the third analysis made it possible to examine the writing scores.

Recall scores. A repeated measures ANOVA was run on students' recall scores. The results indicated reliable main effects for group, F (2, 120) = 5.35, $p < .05$; passage, F (1, 120) = 5.46, $p<.05$; and test time, F (1, 120) = 211.32, $p < .001$. The main effects of group, passage, and test time are presented in Table 2. There was a reliable group by passage interaction F (2, 120) = 10.47,

Insert Table 2 about here

$p < .001$; group by test time interaction, F (2, 120) = 6.58, $p < .01$; passage by test time interaction, F (1, 120) = 6.19, $p < .05$; and group by passage by test time interaction, F (2, 118) = 6.73, $p < .01$.

Tukey post hoc tests indicated no reliable differences ($p>.05$) among groups for recall scores on the pretest. However, all groups recalled reliably more ($p < .05$) on the posttest passage they read than on the pretest passage. But the experimental students reading Posttest Passage B

scored reliably higher ($p < .05$) in recall than the conventional and control students. Experimental and regular students reading Posttest Passage A scored reliably higher on recall than did the control students, although their scores did not differ reliably ($p > .05$) from one another.

Short answer scores. A repeated measures ANOVA was run on students' short answer test scores. The results indicated reliable main effects for group, F (2, 120) = 9.63, $p < .001$; and test time, F (1, 120) = 39.06, $p < .001$. The main effects of group, passage, and test time are presented in Table 3. There was a reliable group by

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Insert Table 3 about here

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test time interaction, F (2, 120) = 7.28, $p < .01$, and a reliable passage by test time interaction, F (1, 120) = 14.83, $p < .001$. Finally, neither the main effect for passage nor the other two interactions were reliable (Fs < 1).

Tukey post hoc tests indicated no reliable differences ($p > .05$) among groups on short answer pretest scoores. The experimental and conventional groups did not differ reliably ($p > .05$) from one another on the posttest scores. But experimental and conventional groups had reliably higher ($p < .05$) short answer scores than the control group

for both Posttest Passages A and B.

Writing scores. A repeated measures ANOVA was run on students' writing scores. The results indicated a reliable main effect for test time, F (1, 123) = 197.68, $p < .001$, but the main effect for group was not significant, $F < 1$. The main effects of test time and group are presented in Table 4. There was a reliable group by test time

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Insert Table 4 about here.

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interaction, F (2, 123) = 10.03, $p < .001$.

Tukey post hoc tests indicated no reliable differences ($p > .05$) among groups on the writing pretest in ratings of overall writing quality. However, the experimental group had reliably higher ($p < .05$) ratings on the writing posttest than the control group. No other differences between groups were reliable.

Familiarity Ratings

An ANOVA was run to determine any differences in students' ratings of their degree of familiarity with the content of Posttest Passages A and B. Results indicated a reliable main effect for passage, F (1, 120) = 11.06, $p < .01$. There was no reliable main effect for group, $F < 1$, and no reliable group by passage interaction, $F < 1$.

Students' mean rating for Posttest Passage A, 3.96 (SD = 1.17), fell between 3 (an average amount) and 4 (a good

deal) in response to the question, "How much of the information in the passage did you already know?" Students' mean rating for Posttest Passage B, 2.27 (SD = .833), fell between 2 (not much) and 3 (an average amount).

Discussion

The purposes of the present study were (1) to examine the effects of explicit instruction focused on discourse structure on university freshmen's recall and comprehension of history textbook passages; and (2) to examine the effects of this instruction on the quality of students' expository writing.

Results indicate that the explicit instruction focused on discourse structure improved students' recall of the unfamiliar history textbook Posttest Passage B. Students in the experimental condition did not differ reliably from students in the conventional or control conditions on verbal scores, pretest recall scores, or pretest short answer scores. But after receiving discourse structure instruction, students in the experimental condition scored reliably better on posttest recall than either conventional or control condition students for the passage rated as essentially unfamiliar.

Regarding Posttest Passage A, a passage rated as essentially familiar, students in the experimental and regular conditions produced reliably better recall scores

than students in the control condition. Thus, when text is essentially familiar, it appears that writing a summary or answering questions is more facilitative in terms of posttest recall than simply rereading assigned texts. At the same time, the results from the present study also indicate that writing summaries and answering questions are equally effective when students are reading familiar material.

Results from the short answer scores for both posttest passages indicate the students in the experimental and conventional conditions scored reliably better than students in the control condition. However, students in the experimental condition did not score reliably better than students in the conventional condition. Thus, writing summaries or answering questions is more facilitative in terms of performance on posttest short answer questions than simply rereading assigned texts.

Results from the writing assessment indicated that the instruction focused on discourse structure generated effects on students' writing performance. On a holistic pretest assessment of writing, students in the experimental condition did not differ reliably from students in the conventional or control groups. However, on the posttest, students in the experimental group scored reliably higher on the holistic writing measure than did students in the control condition. They did not score reliably higher than students in the conventional condition.

The lack of a reliable difference on the writing posttest between students in the experimental and regular conditions may be the result of an overlap of the instructional routines used with both groups. The results suggest that the oral retellings and written responses to questions which were common to both experimental and regular conditions were sufficient to generate an effect comparible to the discourse structure summarization task provided exclusively in the experimental condition.

Finally, a limitation of the present study which must be noted was the use of intact classes. Given course scheduling procedures, it was not feasible to randomly assign students to treatment conditions. It is important to note that there were no reliable pretest differences between the experimental, conventional, and control groups on recall, short answer, writing, or S. A. T. verbal scores. These results would suggest that the three groups were equivalent in reading and writing ability. Additionally, two teachers were responsible for both the experimental and conventional condition instruction thus minimizing a teacher effect.

To conclude, the results of the present study suggest that discourse structure is an important factor in both the comprehension and production of expository text. Additionally, instruction focused on discourse structure may improve college freshmen's recall of unfamiliar

expository text and improve the quality of their expository writing.

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Footnotes

[1]Differences exist between the theories and discourse analysis systems developed by van Dijk and Kintsch; and Meyer. However, Meyer (1982, 1984, 1985a, 1985b) and Meyer and Rice (1984) have emphasized the similarities between the theories and the discourse analysis systems. For a thorough critique of both van Dijk and Kintsch and of Meyer, see Ballstaedt, Schnotz, and Mandl's (1981, April) "Predictability of Learning Results on the Basis of Hierarchial Text Structures," and Voss, Tyler, and Bisanz's (1982) "Prose Comprehension and Memory."

Table 1

A Sample of a Summary from a College-Level History Text Excerpt which Includes One Main Heading and Seven Subheadings

I. Jackson's Administrations.

A. The People's President. Jackson was elected president in 1828; His election hailed as a victory for the common man; He had lived as a frontiersman and Indian fighter and was supported by them; They thought Jackson would protect their interests against the upper class; Jackson's inauguration ceremony included thousands of ordinary spectators; The upper-class Federalists watched in dismay.

Jackson's First Term

B. Jackson's Friends Rewarded. Before election many Jackson supporters argued that government jobs should be theirs; Westerners came to the inauguration looking for jobs; Jackson did remove government employees to make jobs for his supporters; He tried to appoint only qualified men and never made wholesale removals; During his term only 20 percent of the officeholders were removed for political reasons; The spoils system provided jobs for political supporters; Jackson was the first president to use it on a large scale.

C. Jackson's Indian Policy. Jackson had memories of murdered settlers and settlements destroyed by Indians; He believed Indians were a menace and decided to remove them from the frontier; Westerners supported this policy; He sent Army to tell all Indians to move west of the Mississippi; Cherokee Nation objected and took their case to the Supreme Court; Court supported the Cherokee case; Jackson refused to honor the ruling

Jackson's Indian and Road Building Policies

Table 1 cont'd

and continued his policy of moving them west of the Mississippi.

D. Road Building. Westerners lobbied Federal government for road funds; Jackson favored state governments paying for roads; He blocked any federal support for roads; Westerners protested to no avail.

E. The Debate over Land Sales. Westerners were demanding lower land prices; The North opposed lower prices; Expensive land kept immigrants working in northern factories; Low prices allowed factory workers to buy land and to leave factory jobs; In 1829, Senator Foote of Connecticut had Senate investigate land sales; Senator Hayne of South Carolina objected to Foote's investigation.

Land Sales Debate during Jackson's Presidency

F. Hayne's Argument. Hayne scolded the North for its narrow sectionalism; Hayne supported states' rights; the U. S. was to him a league of independent states; He felt each state should set land prices.

G. Webster's Reply. Daniel Webster of Massachusetts replied to Hayne's argument; Webster denied that the U. S. was simply a league of states; He declared that the Union was not of states but of people; He argued that individual states had no right to nullify Federal laws; Only the Supreme Court has that right; He emphasized that states' rights would not work; Chaos would result if each of 24 states could decide whether or not to obey Federal laws; This debate did not settle the issue; For a while it defeated the proposal to stop selling western lands.

Table 2

Means and Standard Deviations (in parentheses) for Written Recall for the Main Effects of Group, Passage, and Test Time

Passage A	Written Recall	
Group	Pretest	Posttest
Experimental	7.23	15.47
	(1.33)	(3.86)
Conventional	9.74	18.32
	(3.14)	(5.33)
Control	6.13	11.24
	(1.05)	(5.72)
Passage B		
Group		
Experimental	8.83	16.02
	(2.74)	(3.48)
Conventional	6.47	9.22
	(1.82)	(4.39)
Control	7.88	12.05
	(3.11)	(1.27)

Table 3

Means and Standard Deviations (in parentheses) for Short Answers for the Main Effects of Group, Passage, and Test Time

Passage A	Short Answer Responses	
Group	Pretest	Posttest
Experimental	7.86	9.65
	(2.01)	(4.21)
Conventional	9.83	10.03
	(4.10)	(2.91)
Control	7.52	6.08
	(3.25)	(2.41)
Passage B		
Group		
Experimental	7.51	11.74
	(1.77)	(4.02)
Conventional	7.64	10.83
	(3.26)	(2.18)
Control	6.14	8.44
	(2.68)	(4.33)

Table 4

Means and Standard Deviations (in parentheses) for the Holistic Writing Assessments

Group	Pretest	Posttest
Experimental	6.12	10.52
	(2.55)	(3.02)
Conventional	5.77	9.86
	(1.88)	(2.41)
Control	5.38	8.97
	(2.09)	(3.58)